






# Eat Smart Be Smart

## Find the Fat! Fast Food Detective

-  **Grade Level:** Fifth      **Lesson Time:** 50 Minutes
-  **Integrated Subject Areas:** Science and Health Enhancement
-  **Montana Content Standard:** Science 2: Students, through the inquiry process, demonstrate knowledge of properties, forms, changes and interactions of physical and chemical systems. Science 3: Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.
-  **Montana Content Standard:** Health Enhancement 1: Students have a basic knowledge and understanding of concepts that promote comprehensive health.
-  **Objectives:** Students will understand the functions of carbohydrates, proteins, and fat; evaluate and analyze fast food choices for calorie and fat content; and identify ways to make healthier choices at fast food restaurants.

### Lesson/Activity

1. Ask the students if they know the three basic nutrients their bodies need that provide calories or energy. They are carbohydrates, proteins, and fats. Ask them if they know what is a calorie. The answer is a measure of how much energy we get from the carbohydrates, proteins and fats in food. Each of these calorie sources provide key nutrients in addition to calories. Ask students if they know which unit of measure gives the most energy or calories per unit (the unit of measure is *gram* for these nutrients listed on the Nutrition Facts Label). The answer is fat. There are nine calories per gram of fat; proteins and carbohydrates give four calories per gram.
2. Work as a class to define carbohydrates, proteins and fats. Carbohydrates provides energy, thiamin, niacin and can be a good source of fiber. Carbohydrates are found in breads, cereals, fruits, vegetables, rice, pasta, dairy products, candies. Protein provides energy and promotes the building and repair of the body tissues, like muscles. Proteins are found in meat, fish, chicken, eggs, peanut butter, dairy products and beans. Fat supplies energy and contains the fat soluble vitamins A, D, E, and K. Fats are found in butter, oils, salad dressing, bacon, chips, some candies, meats, dairy foods and fried foods. Remind the students we all need enough calories to grow but if we get too many our bodies store the calories in the form of extra fat on our bodies. Fat provides the most calories in comparison to protein or carbohydrates and certain kinds of fat can also be unhealthy for our heart.
3. For this lesson, estimate that the students need about 2,000 calories per day and 65 grams of fat. Please note we don't encourage kids to count calories or fat but knowing these measures will help them see how calories and fat can really add up when eating out, especially at fast food restaurants.
4. Divide the students into 5 groups and give each group a meal scenario (from the Fast Food Sample Meals), a paper plate, a tablespoon and a pair of latex or plastic gloves. Have each group add up the calories and fat for their meal. They will need to know that one tablespoon of shortening is equal to 12 grams of fat. One teaspoon of fat equals four grams and there are three teaspoons of fat in a tablespoon. Ask them to calculate out the total grams of fat in the meal and divide that number by 12 to find out how many tablespoons of fat are in the meal. Have each group measure out the correct number of tablespoons onto the paper plate. Show them the correct way to measure by leveling off the tablespoon.

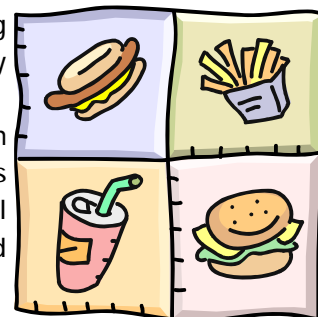
### Materials Needed:

- One copy of the Fast Food Sample Meals, cut apart
- A small tub of shortening
- 5 paper plates
- 5 Tablespoon measures
- 5 pairs of plastic or latex gloves. A source for the plastic gloves could be the food service program
- Teacher Reference:  
Answer Sheet for the Fast Food Sample Meals and  
Good News for Fast Food handout




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5. Have each group report back to the class on their menu and the total calorie and fat content. Have them show the amount of fat on the paper plate. As each group is reporting ask them if they were surprised by any certain food and how much fat it had in it. For example, one container of ranch dip has 21 grams of fat or 7 teaspoons of fat (21 divided by 4 = 7).
6. After each group reports back, then have a class discussion on the most and least healthy choices. Note how much more food you get in meal scenarios 4 and 5 even though they had the least amount of fat. They could make meal five even healthier by having milk with it rather than sports drink.
7. Have students talk about what changes they could make to meals 1, 2, and 3 to make them healthier. Some suggestions for meal 1 include having a single cheeseburger and small fries, or skip the fries and have apple dippers or a yogurt parfait, have milk or 100% juice instead of pop. For meal 2 they could choose small fries, less ranch dip or ketchup instead, and milk or juice. For meal 3 they could skip the fries and have apple dippers or a yogurt parfait.
8. Have the students compare their meals to the reference of 2,000 calories and 65 grams of fat. Some restaurants are offering healthier choices like a baked potato and soups. Becoming aware of their total fat intake can help students make healthier choices.
9. To link this lesson to current events, some states (California) are considering requiring restaurants to post the calories on the menu. Ask the students what they think of this future law.
10. Conclude the lesson by encouraging students to make healthy food choices when eating out. Ask the food service manager to come in and talk with the class on ways she/he plans the school menus to limit the fat content of the meals. If your school is participating in the National School Lunch Program, the school meals are required to be limited to 30% total fat per day (when averaged over the week.)



### Outcome Goals

-  Students will understand what carbohydrate, protein, and fat provide to their bodies.
-  Students will analyze and evaluate various meals at fast food restaurants.
-  Students will consider how to make healthier choices when eating out at fast food restaurants.

### Extending the Lesson

-  Collect menus from five different fast food restaurants. Have the students work in teams to plan a healthy meal (breakfast or lunch) at each of the restaurants. Have them write a paragraph explaining what makes the meal healthy and the reasons for their choices including the key nutrients and the number of food groups that the meal provides. To further practice math skills, have the kids plan a meal that meets the 22 grams of fat limit. Did the students plan a lower fat meal by adding a non-fried vegetable or fruit or by choosing the smaller portion of a fried item? Are the colors of the meal appealing to the eye? Reference: A Closer Look at the MyPyramid, [www.mypyramid.gov](http://www.mypyramid.gov) or the reference section of this guide.

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Acknowledgments/Adapted From

Denise Zimmer, RD